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# *City of Dover, New Hampshire*

OFFICE OF THE FINANCE DIRECTOR

**February 3, 2005**

## REBID - Request For Proposal #B05037
## DIGITAL CORRELATING LOGGING SYSTEM

You are cordially invited to submit a Bid for a Digital Correlating Logging System in accordance with the attached specifications, terms and conditions. Prospective bidders are advised to read this information over carefully prior to submitting a bid.

All Bids must be submitted in a **sealed envelope, plainly marked:**

**"Sealed RFP #B05037 – DIGITAL CORRELATING LOGGING SYSTEM"**
City of Dover, Purchasing Office
288 Central Avenue
Dover, NH 03820-4169

**All Bids must be received no later than February 18, 2005 at 2:00 p.m. EST**

Daniel J. Kelly
Purchasing Agent

DJK:jbc
Attachments

***IMPORTANT**: If you are not interested in submitting a quotation on this particular bid request, but wish to remain on our active bid list, please sign and return the attached form with a NO BID indication. Failure to respond in this manner will result in deletion from our bid list.*

*Vendors wishing to respond to a bid request with alternates to specifications must notify the Purchasing Office no less than five (5) days prior to the bid request opening date. If the proposed changes are acceptable, the City will advise other potential respondents, thereby maintaining equality in the bid process. Failure to advise the City could result either in rejection of the alternate proposal or in an untimely extension of the sealed bid process.*

*Vendors may be asked, as part of the bid evaluation process, to supply company financial information. This data will be held in the strictest confidence and be utilized only to help assess the stability of a responding firm. The records will be returned to you after identifying the successful respondent to the bid request.*

# City of Dover Request For Proposal
# DIGITAL CORRELATING LOGGING SYSTEM
# Bid #B05037

The City of Dover, New Hampshire is requesting pricing information and availability of a digital correlating logging system. General information and specifications are as follows.

***GENERAL INFORMATION:***

This solicitation is for the furnishing of a system of Digital Correlating Loggers to the City of Dover Community Services Department – Water Division. All specified equipment must be "factory new" and not used, rebuilt or reconditioned.

A complete set of Operation and Maintenance Manuals shall be furnished as part of this proposal and any respondent must be able to demonstrate its ability to supply spare/replacement parts and additional materials, as required, during the life expectancy of the proposed equipment.

The system of Digital Correlating Loggers comprises: (a) 8 Digital Correlating Loggers, (b) Docking Station, (c) software for management of the system and pinpointing leaks and (d) sufficient cables and connectors to allow the system components, both hardware and software, to operate in the appropriate manner as intended.

***SPECIFICATIONS:*** ***Following are suggested guidelines for a digital correlating logging / leak detection system. These are a benchmark against which others may offer systems that slightly differ in technical composition but function in a similar fashion and the results produced are relatively comparable. If a vendor has more than one (1) system that are comparable, it is free to offer a price quote for more than one (1) system as long as the differences are identified and clarified in the submission provided the city purchasing office.***

EQUIPMENT

**Digital Correlating Loggers**

1. Correlating Loggers shall:

    - Be fully submersible (IP68 protection) and shock proof to an acceleration of 6,000 *g*'s, including a waterproof electrical connector.

    - Have a rare-earth magnet with a minimum of 45 pounds' pull-force, to ensure rigid attachment to pipe fittings.

    - Be lightweight and small enough to fit easily into valve chambers. Each logger shall be no greater than 4 1/4" tall and 2 5/8" in diameter.

    - Shall be made of a rugged aluminum cylindrical enclosure. A protective, detachable sealing cover with an integral 'D' handle shall be used to lower and raise the logger from the valve chamber conveniently. (Models using chains or wire lifting rings are not acceptable.)

- Have a sensitivity of at least 1 V/*g*, intrinsic noise of less than 0.25 µ*g* / √Hz (100 – 1,000 Hz), and frequency response of at least 3 Hz to 4,000 Hz (-3 dB points).

- Be powered by a non-rechargeable, factory-replaceable lithium battery with at least five (5) years battery life.

- Must be able to perform an overnight recording from which an accurate correlation must be obtained. Each logger must have an electronic clock means with a minimum drift of 0.02 parts per million (including software correction), at least 1 MB of nonvolatile memory, approximately 20 bits of digitizing resolution, and programmable gain.

- Must be capable of varying at least its sampling rate, data encoding means, and data storage requirement – under program control - in order to optimize different recording in different pipe environments.

**Docking Station**

1. Correlating Loggers shall be stored and operated from a Docking Station which shall:

    a. Be capable of connecting to a PC via a cable port in order to download recorded data to be processed with software. Cable shall be provided with docking station.

    b. Be powered from provided data cable.

    c. Be able to hold between one (1) and eight (8) Digital Correlating Loggers simultaneously. The Docking Station must be able to recognize previously deployed loggers electronically so that their position in the Docking Station does not affect the exact pinpointing of any leak(s).

    d. Connect to each logger directly via a waterproof permanently mounted electrical connector, to ensure reliable, high-speed data communications between Digital Correlating Loggers and the Docking Station. (Models using cables or radios are not acceptable due to limited reliability and limited data transmission rates.)

    e. Be enclosed in a rugged, waterproof ABS plastic case, weighing no more than ten (10) pounds (without loggers). The external dimensions of the Docking Station shall not exceed 16 ½" x 13" x 7".

**Software**

1. The Docking Station and Digital Correlating Loggers shall be controlled by a personal computer with software, which shall:

a. Be freely distributable among the user's available Windows™ computers, and support at least Windows™ 95/98/ME/2000/NT/XP. The software may be installed on as many computers as desired.

b. Be easy to use with separate screens for: Deployment and retrieval of loggers, automatic analysis, correlation analysis, and listening analysis.

c. Feature a deployment mode that includes options for overnight and short-term deployment. The user shall be able to select recording times and intervals as determined by the pipe environment. Each logger must be able to record at least 256 seconds of high resolution data in a single deployment.

d. Feature a test mode to allow a thorough test of the integrity of all loggers and the Docking Station.

e. Have the ability to create an automatic leak frequency analysis (automatic filtering) by unique processing of each recorded leak sound. This enables the software automatically to analyze 28 possible pairs of loggers (any two of eight combination) scanning all possible signal frequencies. No user intervention or attention is required. *(Models requiring either manual selection of filters, or automatic selection of a single preset filter, or processing with a multitude of preset filters are not acceptable due to the significant extra time needed to perform sub-optimal, manual analysis.)*

f. Have the capability of saving all recorded data from an unlimited number of correlation studies.

g. Have the capability of reanalyzing any previously saved data at any time and altering any previously stored information, such as inter-sensor distance or pipe type, while reanalyzing.

h. Shall accept at least 15 pipe materials, with diameters ranging from 1/8 inch to 120 inches.

i. Be capable of either computing sound velocity values from pipeline information, or accepting sound velocity values entered directly, or using a table of sound velocity values to override the default values of the program.

j. Accept at least 4 different pipe sections in a single measurement, with the capability of entering pipeline material, diameter and/or sound velocity values for each pipe section.

k. Have conventional linear digital filters with a range of at least 1 Hz to 2,450 Hz. High-pass and low-pass filter settings will be adjustable within the full range in steps of 1 Hz.

l. Have leak sound viewing capability to assess leak sound intensity as a function of time and to view leak sound patterns visually.

m. Be capable of automatic determination of the leak location from the correlation function, and manual measurement of leak location or locations from the correlation function.

2. Data Manager Software Module shall:

- Be fully integrated into the Correlating Logger Software User Interface.
- Automatically create a record for every data recording made, including at least such information as the recording date, logger locations & map coordinates, pipeline material & diameter, correlation result, recording zone, and user name.
- Include an intelligent search facility to find any recording in the database, and allow '1-click' replay/reanalysis of that recording using all the analysis features offered in the software.

**Cabling and connectors**

a. Sufficient in both quantity and style to ensure proper system functionality and operational connectivity between hardware and software.

***MISCELLANEOUS INFORMATION:***

Questions should be directed to either Bill Boulanger, Utilities Supervisor at (603) 516-6459 or Daniel J. Kelly, Purchasing Agent, at (603) 516-6030.

***Respondents must include sufficient documentation to fully explain the system(s) being offered.***

Once the City is in receipt of the system hardware and software, sufficient training to familiarize appropriate (2-3) city personnel in the use of the digital "leak detection" system and its components shall be provided by the vendor at no additional cost to the City.

# City of Dover Request For Proposal
# DIGITAL CORRELATING LOGGING SYSTEM
# Bid #B05037

***REFERENCES:***

Three (3) municipal references must be supplied for whom similar "leak detection systems" have been sold and successfully used for at least a one (1) year period of time. Please be sure to include a contact name and telephone number.

1. _____
   _____
   _____
   _____

2. _____
   _____
   _____
   _____

3. _____
   _____
   _____
   _____

***PRICING:***

Digital correlating system, complete with multiple (8) loggers, docking station, software and cabling/connectors $_____

| | | | |
|---|---|---|---|
| **Submitted by:** | | **FOB Information:** | |
| **Address:** | | | |
| | | **Availability:** | |
| | | | |
| **Warranty/guarantee:** | | **Price holds for:** | |
| **Date:** | | **SSN or EIN:** | |
| **Telephone #:** | | **Fax #:** | |
| **Signature**: | | **Title:** | |

**Check here if appropriate: _____ (X) NO BID**

***Any deviations from the above stated specifications must be so noted and any bid prices must be reflective of these deviations. The FOB point is always to be Dover unless otherwise stated by the bidder. A FOB point other than the City of Dover must be so stipulated by the bidder.***

# City of Dover Request For Proposal
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## BID, RFP AND QUOTE TERMS AND CONDITIONS

1. **BID ACCEPTANCE AND REJECTIONS**: The City of Dover reserves the right to accept any bid, and to reject any or all bids; to award the bid to other than the low bidder if deemed "bid most advantageous to the City"; to accept the bid on one or more items of a proposal, on all items of a proposal or any combination of items of a proposal and to waive any defects in bids**.**

2. **FINAL BID PRICE**: Terms and FOB point are always part of the bid**. FOB POINT IS ALWAYS TO BE DOVER, NH UNLESS OTHERWISE INDICATED BY THE BIDDER. IT IS THE BIDDER'S RESPONSIBILITY TO SO DESIGNATE A FOB POINT OTHER THAN DOVER**. If the bidder has any special payment or delivery clauses which could effect the final delivery price of an item up for bid, that too shall be made part of the bid. If, however, this is not included in the bid, the seller will be solely responsible for any increased prices due to any circumstances.

3. **LATE PROPOSALS/BIDS**: Any bids received after specified date and time will not be considered, nor will late bids be opened.

4. **PAYMENT TERMS**: It is the custom of the City of Dover to pay its bills within 20 - 30 working days following delivery of, and receipt for, all items covered by the purchase order. In submitting bids under these specifications, bidders should take into account all discounts, both trade and time, allowed in accordance with the above payment policy.

5. **BRAND NAMES**: When the item is offered of a brand that is not known for use and/or reputation and financial stability is not well and favorably known to these officials, bids on such unknown brand may be rejected because of this lack of knowledge alone. Prospective bidders with such unknown brand should give information concerning it to the City Purchasing Agent so that it may be checked into for bids for the coming year. The bidder will state in the proposal the brand name and any guarantees of the material he/she proposes to furnish. The brand name is to be for the material that meets all specifications.

6. **SUBCONTRACTORS**: Where a project involves utilizing subcontractors, and the project is completed satisfactorily, the City of Dover reserves the right to request proof of payment to subcontractors by the general contractor prior to making final payment to the general contractor.

7. **PROPER DOCUMENTATION**: Any respondent to a bid request should sign off on and return to the Purchasing Department the original Bid Documentation Package which explains the scope of the bid request. Said signature, in the spaces provided, indicates receipt of, familiarity with and understanding of, and acceptance of the specifications provided, except as otherwise noted by the respondent.

8. **BID RESULTS**: **The Purchasing Office will NOT respond to phone inquiries for Bid Results, other than to identify the apparent low bidder and his total bid price quotation. Individuals or company representatives may secure a comprehensive bid analysis of a particular bid request by either attending a bid opening (which is open to all interested parties); by coming to City Hall after a bid opening and asking to look through the file; by visiting our website at www.ci.dover.nh.us, or by sending a written request for the bid analysis along with a self-addressed stamped envelope.**